Municipal and County Engineering

DESIGN, CONSTRUCTION, OPERATION AND MAINTENANCE OF ALL PUBLIC WORKS

Vol. LXVI. MAY, 1924 No. 5

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Contracts Awarded

ROADS AND STREETS

Ala., Anniston—Morgan-Hill Paving Co., Birmingham, awarded contract for street paving, at $87,000.

Cal., Fullerton—L. A. Paving Co., awarded contracts for E. Sante Fe paving, at $182,000;—207,836.21 sq. ft. 1½-in. Warrenite pavement on 3½-in. bitum. base; 544,305 sq. ft. 1½-in. pavement on 2½-in. base; 38,400 sq. ft. resurfacing; 9,442 ft. curb, headers, culverts, etc.

Cal., Porterville—N. N. Ball, Porterville, awarded contract for paving Orange, F and D Sts., at $81,000.

Cal., Sacramento—Federal Paving Co., San Francisco, awarded contract for constr. of a section of state hwy. in Santa Clara Co., at $86,768; about 3.7 mi. to be paved with asph. conc. and widened with waterbound macadam shoulders.

Fla., Miami Beach—Jno. J. Quinn Co., awarded contract by City at $150,000 to pave to width of 48 ft. and lay conc. curbs and gutters on Lincoln Rd.—Atlantic Ocean to Biscayne Bay; also pave to width of 40 ft. and lay concrete curbs and gutters on Meridian Ave.—5th to Collins Canal.

Idaho, Boise—E. A. Webster, Spokane, awarded contract for grading and surfacing 7 miles over what is known as "Laclede Hill," Bonner County, at $197,912. Entire 7 miles is through solid rock, removal of which will alone cost $100,000.

Ill., Springfield—Following contracts let by Dept. Pub. Works and Bldgs.: Grading: Cameron, Joyce & Co., Keokuk, Ia., SBI, Rt. Nos. 3, 5, 9 and 41, Secs. 35A, 28A, 29A, 30A, 31A, 41A, 12A and 13A, Warren, Joe Daviess, Fulton and Knox Counties, at $29,269, $263,749, $18,454 and $85,681, respectively; SBI Rte. 9, Sec. 25A, Hancock Co. Byers-Wilson Constr. Co., Des Moines, Ia., at $139,929; SBY Rte. 9, Sec. 37A, Fulton-McDonough Cos., to Jenner Bros., Davenport, Ia., at $18,996; Rte. 19, Sec. 32A, Randolph—St. Clair Cos., to Tritt Bros., Belleville, Ill., at $23,512; SBI Rte. 36, Sec. 10A, Adams Co. to A. O. McCoy, Rushville, Ill., at $32,043; SBI Rte. 9, Sec. 24A, Hancock-McDonough Cos. to McAndrew & Hannahs, Keokuk, Ia., at $37,967; SBI, 2, S. 54A, DeWitt Co., to Lee Gallagher & Son, Lincoln, Ill., at $11,994; SBI 16, Secs. 4A and 5A Coles Co. to A. F. Hartigan, 5614 Dorchester Ave., Chicago, Ill., at $57,703; SBI 43A, S. 1A, Menard Co. to Trompeter & Sons, Peru, Ill., at $38,711. Following contracts let for pavement: SBI 9 and 3, Secs. 44, 29, 32 and 34, Fulton-Peoria and Warren Cos. to Cameron, Joyce & Co., Keokuk, Iowa, at $140,017 and $224,922, respect. SBI 31, Sec. 9, Brown Co. to List & Gifford Constr. Co., Kans. City, Mo., at $85,318, also SBI 3, Sec. 44, Schuyler Co., at $12,619; SBI 13, Sec. 23, St. Clair Co. to H. H. Hall Constr. Co., East St. Louis, Ill., at $161,389; SBI 36, S. 9, Adams Co. to List & Weatherly Constr. Co., Kans. City, Mo., at $19,343; SBI 3, S. 67, Monroe Co. to Keeley Bros., Constr. Co., E. St. Louis, Ill., at $34,437; SBI 13, S. 9, Saline Co., Harry A. Carpenter, Terre Haute, Ind., at $287,857; SBI 26, S. 7, Ogle-Lee Cos., to J. J. Dunnegan Construction Co., Shenandoah, Ia. ,at $205,145.

Ill., Springfield—Following contracts let by State Hwy. Dept., March 16 to 31: Shanks & Gannon Constr. Co., Watseka, Ill., contracts for Secs. 24 and 25, SBI Rte. 8, (paving) at $169,878 in Livingston County; Rte. 25, Secs. 15 and 16, Cumberland and Cole Cos., to Stresenreuter Bros., Chicago, Ill., at $238,800; SBI 8, Sec. 32, Woodford Co., to Hedges Constr. Co., Chicago, at $60,505; I. D. Lain, Bloomington, Ill., Rte. 8, Sec. 26A, Livingston Co., at $13,063; al lforegoing pavement work. F. M. Johnson, Dixon, Ill., grading R. 2, Sec. 74A, Lee Co., at $39,516; Wm. O'Neil Sons Co., Faribault, Minn., R. 3, Secs. 26 and 27, Mercer and Warren Cos., paving, at $196,993; Geo. Welch, Beloit, Wis., Rte. 19, Secs. 26 and 27, paving, at $153,837 (McHenry County; Louis Rich Constr. Co., E. St. Louis, Ill., contract for grading Secs. 6A and 7A, Pope and Haddin Cos., at $146,000; C. I. Jones, Omaha, Ill., contract for grading Rte. 32, Secs. 1A and 2A, Shelby and Moultrie Cos., at $19,368.

Ind., Ft. Wayne—Brooks Construction Co., Ft. Wayne, awarded contract for City's paving, at $285,020.

Ia., Marshalltown—Anderson & Empie Constr. Co., 10 Tremont Blk., Marshalltown, awarded contract for paving curbing and gutter, at $290,499—abt. 118,671 sq. yds. plain conc. pavement.

La., Shreveport—Houston Construction Co., Houston, Tex., awarded contract by Caddo Parish at $275,000 for 10¼ mi. conc.; Bates sec., 9-in., 6-in., 9-in., 180 ft. wide, no. and so, of Shreveport; 6 miles assigned to McGuire & Cavender, Shreveport.

Mich., Lansing—Deckerville Const. Co., Deckerville, Mich., awarded contract for Rd. 46-25, Sanilac Co., City of Carsonville, 7-in. F and plain, width 20-45, 1.001 miles, at $29,630, also contr. for Rd. 27-18, D, Sanilac Co. City of Carsonville, Cl. Std. 7-in.—F, and plain, width 20-48, 0.992 mi., at $33,267 (Mich. State Trunk Line contracts). Fed. Aid contracts let as follows: F. A. 88, Ingham Co., Meridian Twp. Cl. G & DS, 2.318 mi. State Construction, at $57,900; F. A. 15, B, Livingston Co., Brighton & Osceola Twps. Cl. F-20, width 20 ft. (4,232) 4.250 mi. State Construction, $17,629. Jas. McKay & Sons, Detroit, awarded contract by Macomb Co. Rd. Commission for 4 miles rein. conc. 8 to 10 inches, Assessment Dist. No. 70, at $127,186.

Mich., Lansing—Following contracts let for Mich. State Trunk Line roads: 13-44, A & B, St. Jos. Co., Mottville Twp., Cl. 7-in. F-Std. 18 ft. wide—1.048 mi. to Wm. H. Friedrich, Coldwater, Mich., at $62,561. Mich Fed. Aid Rd. 63-B, Bay Co. Fraser and Pinconning Twps., Cl. 7 in. F-Std. 18 ft. wide, 4.206 mi. to Rudolph Miller, Bay City, Mich., at $67,209. Mich. Assessment Dist. Rd. A. D. 325, Oceana and Muskegon Cos., Greenwood and Holton Twps., Cl. B, 12 ft. wide, 3.051 mi. to Carson and Chaplin Cos., E. Jordan, Mich., at $22,920. W. McCann, awarded contracts as follows by Allegan County Rd. Comn.: No. Otsego Rd. 2.300 mi. Cl. b-12, $12,668; River Rd. 1.025 mi. Cl. B-9 ft. $9,832; Todd Rd. 2.988 mi. Cl. B-9 ft. $18,211.

Minn., Mantorville—Following contracts let for road and bridge wk. in Dodge County: Job 2401, State Aid Rd. 5—7.71 miles, to O'Malley & Irybour, 509 Globe Bldg., Minneapolis, at $21,444; Job 2303, State Rd. 1—7.46 mi. to Jack Brown Constr. Co., at $32,859.

Minn., St. Paul—Following contracts let for paving: Mississippi River Blvd. bet. Cretin Ave. and W. 7th St. to Fielding & Shepley, Inc., 216 W. University Ave., at $272,249; Phaen Drive to Hanlon and Okes, 338 Lumber Exchange, Minneapolis, at $98,831.

Mo., Trenton—Harrison Construction Co. awarded contract for 2½ miles rein. conc. street paving, at $65,000.

Neb., Lincoln—Following contracts let for road work in various counties: Graveling Lincoln-Woodlawn Proj. 225, F. A. Rd., to Yant Constr. Co., Omaha, at $12,312; grading to J. W. McGeer, 1722 N. Lincoln, at $7,538; Koehler Lbr. & Coal Co., Sterling, contr. for grading, at $5,663, Sterling West Proj. 218A; Central Bridge and Constr. Co., Wahoo, contract for Ashland-Melia Proj. 107-B, at $6,509, also contract for Fremont-Ceresco Proj. 27, Secs. 1 and 2, at $34,358, 11.78 miles; Ashland Cemtery—E Proj. 107-D, also to Central Bridge & Constr. Co., grading $850, surfacing $2,880; culverts to Koehler Lbr. & Coal Co., Sterling, at $3,099; Lincoln-Beatrice Proj. 18 to Yant Construction Co., Omaha, Lancaster Co., at $51,330; D L D Proj. 19 to Central Constr. Co., at $14,638; also, to same contractor, Gravel surf. on Milford—E County Line Proj. 134-A, Seward Co., at $31,317; E. Seabury, Omaha, contr. for grading Wahoo-David City Proj. 204A, Guard rail to Metz Constr. Co., Springfield; Culverts to Artificial Stone Co., Brunning; grading on Wahoo-David City Proj. 204-B, 6.009 mi. to J. H. Hytham, Omaha, at $25,204; guard rail to Central Bridge & Constr. Co., Wahoo; ditch checks to same contractors; Lamoreaux Bros.,-416 Arthur Bldg., Omaha, contract for graveling Nebraska City-Lincoln Proj. 133-A, at $34,776, 8.14 miles; Washington Hwy. Proj. 2C, at $32,670.

Ore., Marshfield—A. B. Gidley, Marshfield, awarded contract for paving 24 blocks with concrete in northwest section of North Bend, at $109,285.

Ore., Portland—Awards of contracts for work on Mount Baker Hwy., in Washington, to lowest bidders recommended by Portland office of U. S.

Bureau of Rds. Strong & Carlson, Tacoma, submitted low bid for grading 9 mi. from Suksan to Austin pass, at $498,875; Sloan Construction Co., Spokane, awarded contract for surfacing 6 mies Glacier-Excelsior section, at $35,790.

Ore., Portland—Bauers and Bauers, awarded contract by Bureau of Public Rds., Portland, for Austin-Unity national forest project, partly within Whitman national forest, Grant and Baker Counties, at $193,227, using government explosives and corrugated pipe.

Ore., Salem—Following contracts let by Oregon State Hwy. Commission: Hill Gluch sec. Baker-Unity Hwy., Baker Co., 6.04 mi. grading. Bids were received on conc. and corrug. pipe, at $151,-008 and $148,912, respect. Award made on comb. bid, some of each kind being specified; Johnson Constrct. Co., Portland, awarded contract for Myers Creek sec. of Roosevelt Coast Hwy., Curry Co., 2.33 mi. grading and for crushed gravel surfacing; grading $62,150; surfacing, $15,620.

S. C., Benson—Hedrich Construction Co., Lexington, N. C., contr. at $175,000 for about 40,000 sq. yds. sheet asphalt street impvts.

S. C., Lexington—State Hwy. Dept. let contracts for 3 sects. of roads: 7.176 mi. State Rte. 1—Orangeburg to Lexington Co. line to point near Swansea; J. F. Clekley, Cope, at $20,702; 12.417 mi. from jct. with State Rte. No. 1 to Swansea to J. L. Carroll, Columbia, at $41,059; surf. 10.441 mi. State Rte. 391—Lexington-Aiken Co. line to Lexington-Saluda Co. line from Prosperity through Batesburg to T. E. Hook, New Brookland, at $44,-175.82.

S. C., Taylorsville—Atlantic Bithulithic Co., Munsey Bldg., Washington, D. C., awarded contract for 16,000 yds. paved streets and walks, at $65,000.

S. D., Pierre—Following contracts let by State Hwy. Comn.: F. A. P. 171A in Roberts Co., to P. G. Thompson, Summit, 12.8 mi., at $48,138; F. A. P. 169, Pennington Co. to W. R. Larson Constr. Co., Sioux Falls, 9.42 mi., at $58,436; F. A. P. 189A, Walworth Co., to Dowd Bros. & Schreiber, Watertown, 2.37 mi., total $25,370; F. A. P. 167A, Bon Homme Co., to Sioux Constr. Co., Sioux City, Ia., at $26,561; F. A. P. 162B, Kaskon Co., 6.06 mi., at $25,864; F. A. P. 149A, Spink Co., to T. J. Tobin, Madison, 24.55 mi., $57,726; F. A. P. 50B, Sanborn Co. to Dowd Bros. & Schreiber, 7.47 mi., at $28,366.

Tenn., Chattanooga—Gamble Construction Co. and West Construction Co., awarded contract by City for laying asphalt and concrete on 8 streets, at $112,000.

Texas, Decatur—E. K. Everheart, Chico, Texas, awarded contract for 11.1 miles rock surf. rock on State Hwy., Wise County, at $120,000.

Tex., Tyler—Tibbetts Construction Co., Mineral Wells, awarded contract for 2 miles 18-ft. concrete pavement, F. A. P. 316, at $60,000.

Wash., Kelso—United Contracting Co. awarded contract by City Council for 3-in. asphaltic conc. base pavement with 2-in. Warrenite bitum. wearing surf., at $86,531.30.

Wash., Olympia—Following contracts let by State Hwy. Comn.: Clear, grade and drain abt. 3.79 mi. State Rd. No. 3 bet. Walla Walla and Mill Crk., Walla Walla Co., F. A. P. 126, at $21,775 to H. L. Wilson, Walla Walla; Pave with conc. abt. 4.95 mi. State Rd. 9, Grays Harbor Co., Wash. F. A. P. 111-A, at $168,951 to D. M. Morgan, Everett; clear, grade, drain and surface with crushed rock abt. 10.25 mi. State Rd. 7, Kittitas Co., at $42,125 to Campbell Const. Co., Sunnyside; clear grade and drain abt. 2.84 mi. State Rd. 11, Spokane Co., to J. E. Edwards, Spokane, at $10,546; clear, grade, drain and surf. with crushed gravel, about 4.0 mi. Methow Valley Hwy., Okanogan Co., at $30,743 to Geo. A. Banderet, Seattle.

Wash., Seattle—State Hwy. Engineer, James Allen, awarded contracts on road work as follows: Grading, draing and surfacing with crushed gravel abt. 3.9 State Road No. 4—Anglin east in Okanogan Co., at $22,516 to Anderson & Nelson, Tonasket; concrete pavement on about 0.12 mi. State Rd. No. 1, Salmon Creek brdg. approaches, Lewis Co., to C. D. Swanson, Chehalis, at $8,369; clear, grade, drain and surface with crush. gravel abt. 3.4 mi. State Rd. No. 5, Lewis Co., to A. W. Lawlei, Puyallup, at $106,874; similar work on 2.11 mi. State Rd. 9, F. A. P. 146-A, Jefferson Co., to Beseloff and Brice, at $55,474; similar work on 2.4 mi. State Rd. No. 1—Tacoma easterly, F. A. P. 120, Sec. B, Pierce Co., at $102,687 to Tacoma Dredging Co.; similar work on abt. 7.6 mi State Rd. 22, Stevens Co., to Morrison and Knudson, Boise, Idaho, at $43,415; conc. pavement on abt. 4.2 mi. hwy. from Anacortes east in Skagit Co., to Norris Bros., Burlington, at $116,817.

Wash., Tacoma—Jos. Warter, Sr., awarded contract for paving Portland Ave.—Bay to Fairbanks Sts.—at $73,445.

Wash., Walla Walla—W. A. Byers & Co., Spokane, awarded contract for 8.35 miles road impvt. in Walla Walla County, at $77,652.

Wis., Juneau—Dodge County Hwy. Comn. awarded following contracts: Juneau-Theresa Rd. to Universal Engineering Co., Medford, at $49,259; Lowell-Reeseville Rd. to Universal Engrg. Co., Medford, at $59,623; Hustisford-Horicon Rd. to Lew Young, Clyman, at $33,908; Lowell-Beaver Dam Rd. to Colburn & Thurston, Anoka, Minn., at $61,-090; Clyman-Hustisford Rd. to Lind and Lindeman, Clyman, at $0,787; Hullsburg-Theresa Rd. to Lind & Lindeman, Clyman, at $32,690; Alderly-Washington Co. Line Rd. to Lew Young, Clyman, at $19,779; Lomira-Campbellsport Rd. to Lind & Lindeman, Clyman, at $9,073; Reeseville-Hubbleton Rd. to Lew Young, at $16,729.

W. Va., Madison—J. M. Cain & Co., Huntington, awarded contract for 4 miles of road bet. Van and Bald Knob, at $38,160; 4 mi. bet. Van and Brown's Creek on Ponk Fork Rid. to McArthur & Hood, at $52,997.

W. Va., Pineville—S. T. Waller & Co., Williamson, awarded contract for 4½ miles road betw. Justice and Iaeger on Tug River Hwy., at $79,-915.

Wis., Eau Claire—A. E. Barnock, 314 Grand Ave. E., Eau Claire, awarded contract for paving, curbing and grading, at $49,000.

Wis., Fond du Lac—August Kramp, Berlin, awarded contract for conc. paving on Ladoga-Brandon Rd. Sec. A, $83,836; Sec. B, $90,321.

Wis., Green Bay—Brown County awarded following contracts for road work: State Rd. to H. O. Schaefer & Sons, Green Bay, at $58,627; Dixon Rd. to H. O. Schafer & Sons, $52,331; Greenleaf-Lark Rd., to Jorgenson Constr. Co., Denmark, at $94,315.

Wis., Waukesha—Jacobus & Winding Constr. Co., 1 State, Milwaukee, awarded contract for F. A. P. 358, Waukesha Co., at $122,511.

SEWERAGE AND SEWAGE TREATMENT

Ala., Russellville—Kearney Construction Co. awarded contract for 9 miles 8-15-inch sewerage system, at $55,000, also construct 8x4x70 ft. disposal plant, at $7,500.

Cal., Los Angeles—Allied Constr. Co., 459 E. 3rd St., awarded contract for constr. of storm sewer in La Brea Ave.—1st alley no. of Pico to 16th Sts., at $68,459.

Cal., Pasadena—C. E. Green, 418 Western Mut. Life Bldg., Los Angeles, awarded contract for constr. of sewer in Arroyo Blvd.—Brookside Park to California St., at $33,065; Cox & Teget, 425 S. Marguerita Ave., Alhambra, at $6,685 for constr. of sewer in La Loma Rd.—Lake View Rd. to Glen Holly and on Ave. 64—La Loma Rd. to 930 ft. no; Dan Dakovich, 621 N. Richard St., Los Angeles, contract for constr. of sewer in Fillmore St.—Euclid to Magnolia Aves.—at $644.40.

Ont., Long Branch—Dufferin Construction Co., Ltd., 210 Victoria St., Toronto, awarded contract for 12 mi. sewers.

Ga., Atlanta—Case & Cothran awarded contract by City to construct final link of Lloyd Street sewer, at $169,519.

Ia., Oelwein—J. A. Dunkel Co., Webster City, awarded contr. for Imhoff tanks, sludge beds, pumping sta. and equipment, at $39,336.

Md., Baltimore—N. Martello, 417 S. Eden St., awarded contr. by Bd. of Awards, for 47,500 lin. ft. 5-24 in. san. sewers in Dist 24-B and P-8, at $169,573.

Mich., Royal Oak—Following sewer contracts let by City Commission: R. D. Baker, constr. of lat. sewer No. 23, $33,640; lat. sewer 25, $58,120; Liberty Constr. Co., constr. sewer 26, $14,666; Wm. Blank and Co., constr. sewer No. 2, $10,642.

Mo., Carthage—V. E. Koch, 14th & Texas Sts., Joplin, awarded contract for 6,227 ft. 8-24-in. sewers, Imhoff tank and disposal plant, at $100,-691.

Mo., Festus—McEachin and McEahin, Southern

Trust Bldg., Little Rock, Ark., awarded contract for sewerage system and disposal plant, at $66,247.

Neb., Benkelman—C. L. Hanson, Charles City, Ia., awarded contract for vit. clay sewers, at $35,910.

Neb., Howells—Asplund Constr. Co., Tecumseh, awarded contract for sewers at $21,995, conc. disposal plant, Sewer Dist. No. 7662. Contr. for disposal plant sublet by contract to Thos. J. Ryan, Schuyler, at $7,131. Vit. clay sewer pipe and brick or concrete manholes.

Neb., Syracuse—W. B. Carter, 606 United Bank Bldg., Sioux City, Iowa, awarded contract for san. sewers in San. Sewer Dist. No. 1, at $34,788.

N. Y., New York—Following sewer contracts let by Pres. Bronx Boro.: Sewers in Rosadale Ave., to Golfin Realty Corp., at $46,931; Dewey and Wilson Aves. to C. W. MacDonald, at $63,477 and $123,470, respectively; Cauldwell Ave. to A. Gregorio Co., $17,582; in Leland Ave. to Hanratty Cont. Corp., at $21,395.

N. Y., St. George—P. F. Connelly Co. awarded contract for temporary sewer in Price St., etc., at $42,618.

Ohio, E. Cleveland—(P. O. Cleveland). Manson Co., Engineers Bldg., Cleveland, awarded contract for 4,080 ft. 4 ft. 6-in. segmental blk. sewer in Hayden Ave., at $110,000.

Ohio, Lima—Haddad-Kairal Constr. Co., Cleveland, awarded contract for intercepting sewer, Cont. B, at $315,912.

Ohio, Toledo—Peters Bros., Spitzer Bldg., awarded contract for 9,405 ft. 6-15-in. v. s. p. exten., at $24,839; 15,298 ft. 6-15-in. v. s. p. in Sewer 89, Broadmoor to Central Gardens, to J. N. Bick, Nasby Bldg., at $34,699.

Tenn., Memphis—Mark F. Reardon awarded contract by City Comn., for sewer work on Peach, Carruthers and Hawthorne Sts., in University Park subdivision; F. D. Harvey contract for sewer work in Palmer Bros. Preston Street subdiv.; Chickasaw Mach. & Fdry. Co., Memphis, for miscel. castings; Philip Brooks, Inc., for miscel. conc.; Fischer Lime & Cement Co. vit. sewer pipe; Memphis Stone and Gravel Co., Memphis, cementing gravel; Greenville Stone and Gravel Co., for crushed stone.

Tex., Kerrville—Elder Constr. Co., 235 Moore Bldg., San Antonio, awarded contract for sewerage system and disposal plant, at $78,000.

Va., Richmond—Kelly & McLane, 2402 Edge Hill Rd., Richmond, awarded contract to construct sewer, at $121,400.

WATER SUPPLY AND PURIFICATION

Brazil, Forteleaza, Clara—C. A. D. Bayley, Interstate Bank Bldg., New Orleans, La., awarded general contract for 3 m. g. filter plant here. Cost $1,500,000. Equipment to International Filter Co., 333 W. 25th Pl., Chicago, Ill., at $27,000.

Fla., Sanford—City awarded contract to Fairbanks-Morse & Co., 900 S. Wabash Ave., Chicago, Ill., for engines for water works plant; Columbia Iron Works, Chattanooga, Tenn., contract for hydrants and valves; National Cast Iron Pipe Co., Birmingham, Ala., contract for water pipe. City will expend $375,000 for water works, including wells, power house reservoir, 20 miles of mains, hydrants, etc.—construction by City forces. W. B. Williams, City Mgr.

Ill., Litchfield—J. T. Walbridge, 1014 S. Michigan Ave., Chicago, awarded general contract for filtration plant, dam, etc., at $259,226; filter equipment to F. B. Leopold, Inc., House Bldg., Pittsburgh, Pa., at $22,000.

Kans., Newton—E. N. Jones, Leavenworth, awarded contract for pumping plant, at $99,650.

Ky., Danville—Cope & Fisher, Decatur, Ill., awarded contr. by City and Hydro-Electric Co., Louisville, for rebldg. municipal water plant, at $125,000.

La., Ferriday—J. C. Montgomery, Kaplan, La., awarded contract for water plant, at $37,500; will install $15,000 pumping equipment; Chicago Bridge & Iron Works, Dallas, Tex., and Fairbanks-Morse & Co., New Orleans, La., have machinery contracts.

Md., Frostburg—Wentworth Construction Co. has contracts for bldg. 4,000,000 gal. capy. reservoir at cost of $50,000.

Mich., Berkeley—Coleman & Harding, 206 E. Grand River Ave., Detroit, awarded contract for furnishing and laying 9,870 ft. 12-in., 6,930 ft. 10-in. and 41,995 ft. 8-in., 2,350 ft. 6-in. cast iron pipe, gates, hydrants, etc., at $170,865.

Mo., Thayer—W. F. Plummer, 434 E. Elm St., Springfield, awarded contract for reservoir, piling, valves and hydrants, at $44,000.

N. Y., Lyndonville—Blair and Ingham, Hilton, awarded contract for new water supply system, at $90,000.

N. C., Dunn—Guion & Withers, Gastonia, N. Car., awarded contract for extension of water line to Cape Fear River, including erection of filter plant, a 1,000,000 gals. reservoir, pumping station, sewer impvts., etc. Contract calls for 5½ miles 14-in. pipe line. Contract price, $263,000.

N. C., Robersonville—Boyd, Higgins & Goforth, Charlotte, N. Car., awarded contract to construct complete water and sewer system, at $85,288.

Ohio, Cincinnati—Crumley, Jones & Crumley, 2301 Concord St., awarded contract for 10,000 ft. 12-in. cast iron mains in Winton and Gray Rds., etc., at $45,276; M. F. Quill & Son, 409 Gerke Bldg., awarded contract for laying 4, 6, 8, 18 and 12-inch cast iron mains, at $64,562.

Okla., Okla City—Smith Bros., Inc., Dallas, Tex., and W. E. Callahan, Constr. Co., Great Southern Life Bldg., Dallas, Tex., awarded contract for main extensions, dam, gates, bank protection and drain lines, at total cost $793,675.

Ore., Portland—U. S. Cast Iron Pipe Co. awarded contracts for 9,800 lin. ft. 36 and 42-in. cast iron and steel mains in Hunting Park Ave., Contr. 664 and 550 tons 24-in. c. ifl mains in 12th St. Contr. 666 to J. J. McHugh, 1617 Race St., at $287,845 and $67,282, respectively; 930 tons 12-in. c. i. mains in Castor, Rahn and Cottman Sts., Contr. 665, to M. and J. B. McHugh, 892 N. Markoe St., at $97,772; condenser shells, piping, nttings, valves, etc., at Lardner's pumping sta., Contr. 667, to Acme Machine Co., 316 N. 17th St., at $1,850.

S. C., Hartsville—Davis Constr. Co., Walton Bldg., Atlanta, Ga., awarded contract for 500,000 gals. rein. conc. reservoir, 20x30 ft. brk. bldg. 2 motor driven centrif. pumps, 1,000 g. p. m., also 4,700 ft. 6-12-in. cast iron water main extensions and 6,1008, 10 and 12-in. sewer pipe extension with manholes, flush tanks, Y branches, etc., to Davis Constr. Co., Walton Bldg., Atlanta, Ga., at $51,786.

S. C., Newberry—Guion & Withers, Gastonia, N. C., awarded contract to construct water supply system; consisting of intake pumping station, one million gal. serv. reservoir, coagulating basin, two 500,000 gal. conc. filters and approx. 14,000 ft. 12-in. supply mains. Water will be pumped from Bush River, distance of 3 miles. Contract price, $83,749.50.

Va., Marion—E. S. McCorkle of Mack Constructing Co., Johnson City, Tenn., awarded contract to construct water system, at $50,000.

Va., Chatham—Haynes Brown, Chatham, awarded contract to construct filtration and pumping plant for municipal water works, at $45,595.

Prospective Work

ROADS AND STREETS

Ala., Tuscaloosa—Election in May to vote on $600,000 bonds. Tuscaloosa County Bd. of Revenue contemplates bldg. 4 concrete roads as follows: Tuscaloosa-Birmingham rd. from 11 mile post to Jefferson Co. line; Tuscaloosa-Greensboro rd. from no. end of Little Sandy brdg. to Hale Co. line; Tuscaloosa-Eutaw rd. from Tuscaloosa to Green Co. line; Tuscaloosa-Columbus rd. from Northport to Pickens Co. line.

Ark., Marianna—Lee County plans to grade 29 roads totaling 225 miles. For information address Judge Plummer.

Cal., Glendale—City Council has started proceed-

ings for approximately $100,000 street work. This is for paving work being promoted by Hamlin and Hepburn, 203 W. Broadway, real est. firm. Separate proceedings for water pipe will be instituted. Ben F. Dupuy, City Engr.; A. J. Van Wie, City Clk.

Cal., San Diego—Council has adopted resolution of intention to improve Cleveland Ave. and Vermont St., involving 116,329 sq. ft. paving with 1½-in. asph. conc. wearing surf. on 4-in. cement conc. base; 198,441.2 sq. ft. paving with 1½-in. asph. conc. wearing surf. on 2½-in. bitum. base; 147.5 lin. ft. cem. conc. curb; 419.9 sq. ft. cem. conc. walk; five 4-in. cem. conc. sewer laterals; 5 6-in. cem. conc. sewer laterals. F. A. Rhodes, City Engr.

D. C., Washington—As passed by the House the army appropriation bill carried $650,000 for miscellaneous expenditures on roads, trails and bridges to be expended by Alaska Road Commission.

Fla., Bartow—Polk County, Fort Meade Dist. plans to asphalt 40 to 50 miles roads in District. Considering issuing $375,000 bonds.

Fla., Miami—City Commissioners have authorized expenditure of $485,781 to pave streets.

Fla., Tavares—City considering paving all streets with asphalt. Est. cost $160,000 to $200,000. Will vote on bond issue. J. W. Hunter, Mayor.

Ga., Commerce—Stone Mountain Hwy. Assn. contemplates expending from $2,000,000 to $2,500,000 to pave highway from Atlanta, Ga., to Anderson, S. Car., via Stone Mtn., Lawrenceville, Winder, Jefferson, Commerce, Carnesville, Lavonia, Knox Bridge.

Ga., Macon—$600,000 voted for following impvts.: Paving, $100,000; bridge, $150,000; sewers, $225,000; fire engine house and equipment, $25,000; stadium, $100,000. Luther Williams, Mayor.

Idaho, Pocatello—County Commrs. have approved pole line road from here to Fort Hall. This is part of Yellowstone Hwy. Road will cost approx. $90,000.

Ia., Cedar Falls—City considering paving 41 additional blks. this year. S. S. Huntley, City Clk.

Mich., Centerville—Unofficial returns from recent election in St. Joseph County show that the proposition for bonding County for $250,000 for county's share of cost of construction of trunk line highways carried by majority of more than 3,500 .

Mich., Detroit—Orders issued by Wayne Co. Rd. Comn. (Leroy C. Smith, Engr.-Mgr.) for opening up of operations on the big $4,000,000 paving program to be carried out in Wayne County this season. If all plans mature, and it is likely they will this will be greatest year in rd. bldg. in Wayne Co. The Commission has worked out comprehensive program to meet tremendous traffic demands and plans include widening of main thoroughfares and thickening of pavement materially. Extensive brdg. bldg. constr. program will also be carried out in connection with the highway development.

Mich., Port Huron—City voted $80,000 for paving and $140,000 for sewers by substantial margin.

Mo., Centralia—Board of Aldermen have decided to launch extensive paving program. Benham Engineering Co., Cons. Engrs., Kansas City, Mo., retained to make surveys, plans, specfs. and estimates. May pave business district around City square and extend paving well into residence districts. Arthur Bruton, Mayor.

Mo., Moberly—City Council will take immediate steps to resurface, repair and widen approx. 40 blocks of pavement. Benham Engrg. Co., Kans. City, Mo., Cons. Engrs. Rolla Rothwell, Mayor.

Mont., Glasgow—Arrangements made with State Hwy. Commission for Fed. Aid Rd. bet. Nashua Bretzke, Co. Clk.

N. Car., Asheville—City plans civic impvts. Considering $1,933,000 bond issue for widening streets, new thoroughfares and bldg. Frank L. Conder, Commr. Pub. Works.

Okla., Duncan—Stephens County plans east and west hard surf. road across County. Est. cost, $800,000.

Okla., Enid—Election in May to vote on $1,000,000 bonds for hard surface roads in Garfield County. For detailed information address Co. Commrs.

Okla., Guthrie—City and Logan County plan hard surf. roads across State to be linked in north and south hwy. Okla. City-Tulsa, and Okla. City-Enid Hwy. Considering $750,000 bond issue. State Hwy will furnish $750,000.

Okla., Okla. City—State Hwy. Dept. Okla. City, has approved 60 miles roads and 5 bridge projects, totaling in cost $2,465,000; 36.86 miles Cleveland County, $1,426,000; 15 miles Washington Co., 8 miles Creek County.

Tenn., Rogersville—State Hwy. Dept., Nashville, plans 5½ mi. waterbound macadam road on Lonesome Pine Trail—Rogersville to Pressman's home. Abt. $175,000.

Tex., Bellville—Austin County Precinct No. 1 plans to construct road. $450,000 bonds voted.

Texas, Henderson—City plans street paving. $100,000 bonds voted.

Tex., Huntsville—Walker County plans to hard surface 5 State highways. Voted $1,500,000 bonds.

Va., Boydton—State Hwy. Comn., Richmond, will expend $75,000 to construct 5.1 miles bitum| macadam road from Boydton to Chase City.

W. Va., Phillipi—Barbour County, Union Dist., plans bldg. permanent highway through district betw. Philippi and Clarksburg. $325,000 bonds voted.

SEWERAGE AND SEWAGE TREATMENT

Ala., Birmingham—City will open bids in 30 to 60 days for enlarging present system; brick, cast iron, terra cotta and segment block pipe.

Cal., Glendale—First block of Glendale sewer bonds, amounting to $652,000, has been sold to the Anglo-London-Paris Co., at par, accrued interest and a premium of $9,128. Total issue is $1,600,000.

Cal., La Habra—$75,000 bond issue carried at recent election. Bonds will be issued by La Habra San. Dist.

Cal., La Verne—Plans prepared for 6 miles sewerage system. Est. cost about $25,000 or over. Black and Veatch, Fay Bldg., Los Angeles, Cons. Engrs.

Cal., Pismo Beach—The $33,000 sewage disposal bond issue carried at recent election. Project will consist of settling tank, 1,200-ft. ocean outfall of cast iron pipe, 12-in. diam. Plans being prepared by Black and Veatch, 200 Fay Bldg., Los Angeles. Bids will be called for in about six weeks.

Cal., San Diego—City Council has adopted resolution for constr. of modern sewerage system in Mission Beach. Plans approved by State Bd. of Health and City Engineer's Dept. Bids will be called for as soon as legally possible and work rushed to early completion.

Cal., Santa Barbara—Herbert Nunn, City Mgr., has announced that a temporary chlorination plant will be erected at once. This is to comply with State Health Department's ruling. Later a perm. sewage plant will be constructed.

Ont., Long Branch—Plans being prepared for sewage disposal plant to be built here. Messrs. James, Proctor and Redfern, Ltd., Toronto, Engrs.

Fla., Miami—City having plans prepared for intercepting storm and san. sewers in So. Bay Shore Drive.

Ga., Albany—City will open bids in mid-summer for storm sewers extension, 18-20-inch pipe. Est. cost approx. $100,000. W. Huston Smith, City Mgr.

Ill., Wheaton—Town plans to construct san. sewers and disposal plant. Est. cost $300,000. Alvord, Burdick and Howson, 8 S. Dearborn St., Chicago, Cons. Engrs.

Ind., Gary—City contemplates following impvts.: Sewage settling tanks, $300,000; sewage pumping sta., $210,000; storm sewers, $250,000. Alvord, Burdick & Howson, 8. S. Dearborn Ct., Chicago, Cons. Engrs.

Ia., Des Moines—City will soon receive bids for Beaver Avenue sewer system, 5 miles pipe line and pumping plant. Est. cost $110,000. K. C. Kostberg, City Engr.

Ia., Sioux City—Resolution passed and bids will soon be called for san. sewers in Dace St.—Fairmount to S. Irene; storm sewers in W. 2nd St.—George to Ross Sts.; Ross St.—W. 2nd to W. 1st Sts. L. N. Hintgen, City Engr. F. A. Garnsey, City Clerk.

Kans., Kansas City—City considering purchasing 18 flood sewer pumps. Est. cost $180,000. G. T. Darby, City Hall, Purch. Agt.

La., Baton Rouge—City contemplates installing sewerage system in suburbs. Wade Bynum, Mayor.

BUYERS' GUIDE

Aerial Tramways.
American Steel & Wire Co.

Air Lift Pumps.
Harris Air Pump Co.

Armor Plates.
Truscon Steel Co.

Asphalt.
Bitoslag Paving Co.
The Barrett Co.
Kentucky Rock Asphalt Co.
Pioneer Asphalt Co.
Standard Oil Co. (Indiana)
The Texas Co.
Uvalde Asphalt Paving Co.
Warren Asphalt Paving Co., The

Asphalt Filler.
The Barrett Co.
Bitoslag Paving Co.
Standard Oil Co. (Indiana)
The Texas Co.
Warren Bros. Co.

Asphalt Floors.
The Barrett Co.
The Texas Co.
Warren Bros. Co.

Asphalt Machinery.
Chausse Oil Burner Co.
Cummer & Son Co., The F. D.

Asphalt Plants.
Austin Machinery Corporation.
Cummer & Son Co., The F. D.
Littleford Brothers.
Warren Bros. Co.

Asphalt Railroad Plants
Cummer & Son Co., The F. D.
Warren Bros. Co.

Asphalt Tools.
Chausse Oil Burner Co.
Littleford Brothers.
Warren Bros. Co.

Asphalt Tool Wagons.
Chausse Oil Burner Co.
Littleford Brothers.

Auto Fire Apparatus.
Kissel Motor Car Co.
International Motor Co.
Pierce-Arrow Motor Car Co.

Automobiles.
Ford Motor Co.

Back Fillers.
Austin Machinery Corporation.
Pawling & Harnischfeger.

Bar Cutters and Benders.
Koehring Co.

Bars, Reinforcing.
Truscon Steel Co.

Binders, Road.
The Barrett Co.
Pioneer Asphalt Co.
Standard Oil Co. (Indiana)
The Texas Co.
Uvalde Asphalt Paving Co.
Warren Bros. Co.

Bitulithic Pavements.
Warren Bros. Co.

Blasting Accessories.
E. I. du Pont de Nemours & Co., Inc.

Blasting Powder.
E. I. du Pont de Nemours & Co., Inc.

Bodies.
Lee Trailer and Body Co.
Littleford Brothers.

Braces, Extension.
Kalamazoo Fdy. & Machine Co.

Brick Rattlers.
Olsen & Co., Tinius.

Brick-Testing Machinery.
Tinius Olsen Testing Mach. Co.

Brick, Paving.
National Paving Brick Mfrs. Assn.

Bridges.
Luten, Daniel B.

Buckets, Dredging, Excavating and Sewer.
Pawling & Harnischfeger.

Buckets, Dumping
Littleford Brothers.
Pawling & Harnischfeger

Cableway Accessories.
Sauerman Bros.

Cableway Excavators.
Sauerman Bros.

Calculators.
Kolesch & Co.

Car Unloaders.
Austin Machinery Corporation.
Heltzel Steel Form & Iron Co.

Castings.
U. S. Cast Iron Pipe & Fdy. Co.

Cast Iron Pipe.
U. S. Cast Iron Pipe & Fdy. Co.

Catchbasins.
Dee Co., Wm. E.
Madison Foundry Co.

Cement Gun Work.
Indiana Gunite & Const. Co.

Cement Testing.
Chicago Paving Laboratory.
Flood & Co., Walter H.
Howard, J. W.
Hunt Co., Robert W.
Indianapolis Paving Laboratory.
Van Trump, Isaac.

Cement Testing Machinery.
Tinius Olsen Testing Mach. Co

Central Heating Plants.
American District Steam Co.

Chemists, Engineering
Chicago Paving Laboratory.
Dow & Smith.
Flood & Co., Walter H.
Howard, J. W.
Hunt Co., Robert W.
Indianapolis Paving Laboratory.
Van Trump, Isaac.

Chimneys, Concrete.
Truscon Steel Co.

Chimneys, Steel.
Littleford Brothers.

Chloride of Lime.
Pennsylvania Salt Mfg. Co.

Clay Pipe, Vitrified.
Clay Products Assn.

Clay Products.
Clay Products Assn.

Concrete Bridges.
Luten, Daniel B.

Concrete Mixers.
Austin Machinery Corporation.
Koehring Co.
Smith Co., T. L., The

Concrete, Reinforcement.
American Steel & Wire Co.
Truscon Steel Co.

Conduits.
Cannelton Sewer Pipe Co.
Carey Co., Philip, The.
Rosing, Inc., Astrid S.
Truscon Steel Co.

Conduit Rods.
Stewart, W. H.

Consulting Engineers.
Alvord, Burdick & Howson.
Artingstall, Wm.
Brossman, Chas.
Burd & Giffels.
Chicago Paving Laboratory.
City Wastes Disposal Co.
Dow & Smith.
Druar & Milinowski.
Flood, Walter H., & Co.
Howard, J. W.
Hunt Co., Robert W.
Indianapolis Paving Laboratory.
Jones, Sam L.
Kirchoffer, W. G.
Kirschbraun, Lester.
Luten, Daniel B.
Potter, Alexander.
Van Trump, Isaac.
Wells, James P.

Contractors.
City Wastes Disposal Co.
Sullivan, Long & Hagerty.
Warren Bros. Co.

Contractors' Tools and Machinery.
Austin Machinery Corporation.
Austin-Western Road Machinery Co.
Good Roads Machinery Co., Inc.
Smith Co., T. L., The

Contractors' Wagons.
Austin Machinery Corporation.
Austin-Western Road Machinery Co.

Conveying Machinery.
Mead-Morrison Mfg. Co.
Pawling & Harnischfeger.
Portable Machinery Co., Inc.
Webster Mfg. Co.

Cranes and Hoists.
Austin Machinery Corporation.
Heltzel Steel Form & Iron Co.
Pawling & Harnischfeger.

Creosote.
The Barrett Co.
Republic Creosoting Co.

Creosoted Wood Block.
(Factory Floors, Bridge Floors)
Republic Creosoting Co.

Crushers, Rock and Ore.
Austin-Western Road Machinery Co.
Good Roads Machinery Co., Inc.

Culvert Pipe, Vitrified.
Cannelton Pipe Co.
Dee Clay Mfg. Co., Wm. E.

Culverts.
Austin-Western Road Machinery Co.
Newport Culvert Co.
Truscon Steel Co.

Curb and Gutter Forms.
Heltzel Steel Form & Iron Co.
Truscon Steel Co.

Curb Bar.
Truscon Steel Co.

La., Shreveport—City plans to construct 8-26-in. vit. clay san. sewers in Northside bus. dist., at cost of $275,000. A. J. Hawkins, Engr., City Hall.

Mich., Detroit—City having plans prepared for experimental sewage disposal plant (sedimentation process and screens) at outlet of Lonyo Rd. into Baby Creek. Est. cost $80,000. G. Jerome, City Engr.

Minn., Duluth—City Engineer John Wilson states $2,000,000 is needed to provide adequate storm sewer system; also sewage treatment will be necessary before long.

Miss., Inverness—City having plans prepared for sewer system by Henry A. Mentz, Engr., Magnolia. Miss.

N. Y., Binghamton—Common Council and Board of Public Works had plans prepared for Trout Brook sewer, providing surf. and san. drains from Glenwood Ave. to Front St. Est. cost $150,000. B. Winsor, Commr. Public Works.

N. Y., Brooklyn—E. Riegelmann, Boro. Pres., Boro Hall will soon take bids for sewers in Sec. 2 of Foster Ave., at intersection of Ft. Hamilton Parkway and 62nd St. and intersect. of Foster Ave. and Ocean Parkway. Est. cost $2,900,000.

N. C., Durham—City will soon call for bids on $35,000 sewer system. N. W. Keuffner, City Engr.

N. C., High Point—City will issue $299,000 bonds for enlargement and extension of sewer system; $180,000 for st. impvts., $30,000 for extending and enlarging elec. light system; $200,000 for extending water works system. Ed. L. Ragan, City Secy.

Ohio, Akron—City plans to lay storm sewers in Massillon and Ira Avenues. Est. cost $100,000.

Ohio, Howenstine—(North Industry, P. O.)—City disposal plant near here. Est. cost $800,000. W. E. of Canton will soon receive bids for additions to Sarver, City Hall, Canton, Engr.

Okla., Oilton—City Councill will call election to vote bonds for san. sewer extensions. Benham Engrg. Co., Kansas City, Mo., Engrs. J. H. Eskew, Mayor.

Ore., Monmouth—At meeting of Council, investigating engineers, Stevens & Koon, gave report on proposed sewerage system. Following is statement of est. cost of system outlined and recommended for construction. Main sewage disposal plant, including tank of Imhoff type and sludge bed, $10,000; outfall sewer, $2,992; trunk sewer, $25,678. Total cost of main sewer and tank, $38,670. Lateral sewers, including manholes, lampholes, wye branches, flush tanks, ready for use, $42,977. Total est. cost of complete sewer system, $81,647.

S. C., Greer—City having surveys made by R E. Dalton, Civil Engr. for installing sewer line on Hill St.

S. D., Sioux Falls—City Engineer instructed to draw plans for sewage disp. plant: City plans ejector plant and intercepting sewer. Contemplate laying sewers on North St. bet. Cliff and Lewis and Blauvelt Ave. between North and Mulberry. Jno. Mundt, Sewer and Water Commr.

Tex., Ft. Worth—City will probably extend sewer system to So. Ft. Worth. Est. cost abt. $25,000.

Va., Blackburg—$50,000 bonds voted for impvts. to sewer sys.

Wis., Tomahawk—City Counmil has authorized Bd. of Pub. Wks. to purchase water and sewer pipe for 9th St. sewer dist.; also water pipe on Washington Ave. bet. 2nd and 4th Sts.

WATER SUPPLY AND PURIFICATION

Ala., Auburn—Ala. Polytechnic Inst., (Dr. Spring Dowell, Pres.) will construct water system at Auburn; copy. 36,000 gals daily, cost $50,000. Will construct 15-ft. conc. dam and install 8-in. water mains and mechanical filters, etc. Construction will begin in June.

Ariz., Phoenix—Salt River Valley Water Users' Assn. plans to expend about $4,000,000 for constr. of Horse Mesa Dam across Salt River, 12 mi. above smaller dam, now under constr. at Morman Flat. New structure, as planned, will be rubble stone and conc. 268 ft. high, 140 ft. wide at stream level and 400 feet. wide at top. It will develop abt. 35,000 h. p. Inspiration Consolidated Copper Co., Miami, alone will use power sufficient to pay Association about $1,000,000 a year.

Cal., Claremont—Claremont Domestic Water Co. authorized by Railroad Commission to issue and sell $38,000 of its first mortgage 6 per cent bonds for new water mains. Several small lines will be replaced with 8-in. steel pipe.

Cal., Newport Beach—City Engineer instructed to prepare plans and specfs. for adequate water system which will take care of fire dept. facilities. Water capy. to be increased from 3,270,000 gals. per day to 5,000,000.

Cal., San Bernardino—Dr. J. N. Bayliss named Chairman of Executive Comm. in charge of campaign to put over the $275,000 water bond issue for development of Devil Canyon water supply and for new mains.

Cal., Sierra Madre—The $80,000 water bond issue carried at recent election. Of this sum $35,000 will be devoted to development of City's storage sys., while remainder will be used to lay new pipe mains on new streets and for general impvts.

Ont., Brantford—Water Works Commr. has consulted with W. S. Lee, Montreal engineer, regarding water works, pumping station, filtration plant and impvts., estimated to cost about $480,000.

B. C., Chilliwack—Elk Creek Water Works Co., Ltd., of Chilliwack having plans prepared for $20,000 water works extension. Work consists of 8-in. wooden mains through center of city and some 10-in. cast iron extensions and hydrants.

B. C., Cranbrook—Total of $45,000 will be expended this year by City if by-law, to be submitted asking permission to make impvts. to City water supply, is passed. It is planned to place dam in Gold Creek and connect it with St. Joseph's reservoir. DeWolf & Ham, Engrs., making survey.

Can., Cumberland, B. C.—Canadian National Railway plans construction of a 400,000,000-gal. dam near Regina for locomotive boiler supply. Est. $250,000.

Ont., London—Public Utilities Commission, London, contemplates pumping equipt. to cost $80,000. Estimates to be secured on installation of a Diesel engine and electric generators. London Public Utilities Comn. also considering extending water main in Mahaffy subdiv.

Ont., Ottawa—Laying of water mains and services, to cost $70,000, will be started by labor in May. W. E. MacDonald is engineer in charge of $15,000 chloramine plant to be constructed by City of Ottawa.

Canada, Quebec—Que. Legislature has approved additional expenditures for water power development. Additional $500,000 provided for further development of St. Maurice River, making total of $3,000,000. Additional $950,000 provided for development of power at Lake Kenogami, making total of $2,750,000.

D. C., Washington—Water extensions and installation of elec. pumping units planned by Suburban San. Comn., 1420 New York Ave., N. W. T. Howard Duckett, Chrman. for Montgomery and Prince George Cos., Md. Est. cost $1,000,000. R. B. Morse, Hyattsville, Md. Engr.

Fla., Miami—City Commrs., (Ernest Cotton, Director of Pub. Services have retained Alvord, Burdick & Howson, Cons. Engrs., Chicago, Illinois, to prepare plans and specfs. for bringing soft water supply system to Miami.

Fla., Tampa—City Cimmission has approved plans by Nicholas S. Hill, Jr., City Cons. Engr., for water plant on Hillsborough River. Bids will soon be advertised for.

Ga., Columbus—City will expend $250,000 during next 3 years for enlargements and extensions to water works. W. J. Wood, Chrmn. Water Board.

Ga., Dawson—Council has under consideration installation of water works system. $35,000.

Ill., Jonesboro—$42,000 bonds voted for water wks. impvts. Will soon receive bids. Work involves plant, tower tank and 4-6-inch mains. W. A. Fuller Co., St. Louis, Engrs.

Ill., Niles Center—Village orders levying of assessment to pay cost of constr. of system of cast iron pies, hydrants and appurts. Otto Hoth, Commr.

Ill., Springfield—Bonds for water works impvts., including filtration plant, carried at election. Plans now under way for impvts. Est. cost $450,000. Burns & McDonnell Engrg. Co., Kans. City, Mo., Cons. Engrs.

Ind., Boonville—Chas. Brossman, of Brossman & Company, Indianapolis, Cons. Engrs., has submitted report of his surveys for proposed water system.

BUYERS' GUIDE

Deep Well Pumps.
Harris Air Pump Co.
Keystone Driller Co.

Drag-Line Excavators.
Austin Machinery Corporation.

Drag Scrapers.
Austin-Western Road Machinery Co.

Drain Tile.
Dee Clay Mfg. Co., W. E.
Rosing, Inc., Astrid S.

Dryers.
Cummer & Son, The F. D.

Dump Cars.
Austin-Western Road Machinery Co.

Dump Wagons.
Austin-Western Road Machinery Co.

Dust Laying Compound.
The Barrett Co.
Standard Oil Co. (Indiana)
The Texas Co.

Dynamite.
E. I. du Pont de Nemours & Co., Inc.

Edge Protector.
Truscon Steel Co.

Electrical Machinery.
Westinghouse Electric & Mfg. Co.

Electrical Wires & Cables.
American Steel & Wire Co.

Elevating Graders.
Austin-Western Road Machinery Co.

Excavating Machinery.
Austin Machinery Corp.
Pawling & Harnischfeger.
Sauerman Bros.
Smith Co., T. L., The

Expansion Joint Compound.
The Barrett Co.
Carey Co., Philip, The
Pioneer Asphalt Co.
Truscon Steel Co.

Explosives.
E. I. du Pont de Nemours & Co., Inc.

Fillers (Paving Joint).
The Barrett Co.
Carey Co., Philip, The
Pioneer Asphalt Co.
The Texas Co.

Fire Brick.
Cannelton Sewer Pipe Co.
Dee Clay Mfg. Co., W. E.

Flue Liners.
Cannelton Sewer Pipe Co.
Dee Clay Mfg. Co., W. E.

Forms, Sidewalks, Curb & Gutter.
Heltzel Steel Form & Iron Co.
Truscon Steel Co.

Forms, Road.
Heltzel Steel Form & Iron Co.
Truscon Steel Co.

Gas Pipe.
U. S. Cast Iron Pipe & Fdy. Co.

Gates, Sluice.
Coldwell-Wilcox Co.

Graders.
Austin-Western Road Machinery Co.

Granite Block.
Granite Paving Block Mfrs. Assn. of the U. S., Inc.

Gunite.
Indiana Gunite & Const. Co.

Heaters (Rock and Sand).
Littleford Bros.

Heating Plants, Central.
American District Steam Co.

Heating Wagons (Oil and Tar).
Good Roads Machinery Co., Inc.
Littleford Bros.

Hoists (Concrete, Gasoline and Hand).
Pawling & Harnischfeger.

Hoists, Electric.
Mead-Morrison Mfg. Co.
Pawling & Harnischfeger.

Hoists, Steam.
C. H. & E. Mfg. Co.
Mead-Morrison Mfg. Co.

Hot Mixers.
Austin Machinery Corp.

Inlets (Sewer).
Dee Co., Wm. E.
Madison Foundry Co.

Insulating Material.
The Barrett Co.
Pioneer Asphalt Co.

Joint Fillers (Paving).
The Barrett Co.
Carey Co., Philip, The.
The Texas Company.

Kettles (Portable).
Cummer & Son Co., The F. D.
Good Roads Machinery Co., Inc.
Littleford Brothers.

Manhole Covers.
Madison Foundry Co.
Dee Co., Wm. E.

Mastic.
The Barrett Co.
Pioneer Asphalt Co.

Meter Boxes.
McNutt Meter Box Co.

Mixers, Asphalt.
Austin Machinery Corporation.
Cummer & Sons Co., The F. D.

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Carey Co., Philip The
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Paving Joint Filler.
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Littleford Brothers.
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Austin-Western Road Machinery Co.
Good Roads Machinery Co., Inc.

Powder (Blasting).
E. I. du Pont de Nemours & Co., Inc.

Ia., Marshalltown—$300,000 bonds voted here, at recent election for extension of mains and installation of filter system.

Ia., Storm Water—Will start work soon to enlarging sedimentation basin, installing aerator, making 4, instead of 2, filter beds, double capy. of clear well. Roy U. Kinne, City Clk.

La., Glemora—City engaged Henry A. Mentz, Engrs., Magnolia, Miss., as engineers for water supply and fire protection system.

La., Lafayette—$200,000 bonds voted for water and light plant. Robt. L. Moulton, Mayor.

La., Oak Grove—City has retained Henry A. Mentz, Engrs., Magnolia, Miss., to plan and supervise installation of water works and elec. light plant. $45,000 available.

Md., Oakland—Shellman Water Co. granted permission by Public Service Commission to increase capital $35,000.

Maryland—Bond issues totaling $18,850,000 to provide or extend water and sewer systems in various sections of State, authorized by last Legislature and approved by Governor Ritchie as follows: Baltimore Co., Metropolitan Dist., $6,000,000; Cumberland, $750,000; Salisbury, $550,000; Frederick, $250,000; Gaithersburg and Washington Grove, $150,000; Havre de Grace, $125,000; North East, $125,000; Delmar, $100,000; Manchester, $60,000; Hurlock, $60,000; Ellicott City, $40,000 Leonardtown, $35,000; Lonaconing, $25,000; Hancock, $20,000; Mt. Airy, $15,000; Middletown, $10,000; Preston, $10,000; Rockville, $10,000; Ocean City, $10,000; Laurel, $500; Baltimore City, $10,000,000. Abel Wolman, 2630 Eutaw Pl. Baltimore, Chf. Sanitary Engr. of Dept. of Health.

Mass., Greenfield—Water Dept. will lay 3 miles pipe line at early date. H. L. Field, 243 Federal St., Engr.

Mich., Kalamazoo—Appropriation voted for drilling additional wells. Earl Norman, Director of Pub. Utilities, now making test drill.

Mich., Port Huron—Plans being formulated for water works impvts. to involve new 25,000,000-gal. turbine driven centrif. pump and laying 5,000 ft. 6 and 8-inch cast iron mains. Est. cost $100,000. E. R. Whitmore, Engr. City Hall, Detroit.

Minn., Isanti—Engrs., Druar & Milinowski, 500 Globe Bldg., St. Paul, have submitted reports for water works system; will probably mature in spring. Est. cost $40,000. Have also submitted reports on water works and sewerage system at Tigerton, Wisconsin; will probably mature this spring.

Miss., Meridian—City has site and will begin construction of reservoir. $80,000.

Mo., Lamar—City Council decided to have 2,500 ft. additional water mains installed.

N. J., Riverdale—Application made by Riverdale Boro. to No. Jersey Dist. Water Supply Comn., for supply from Pompton Lakes—will mean 6-in. main connection.

N. Y., Clinton—City plans to extend water supply. Est. cost $50,000. G. R. Taylor, Village Pres.

N. Y., Herkimer—Water supply, needed here, will cost about $1,000,000, according to Engineer's est. Impvt. includes mill creek intake, pipe line and equalizer, reservoir and gate house, 16-in. distribution line and 10-in. fire loop. Details of plans at office of Municipal Commission.

N. Y., Utica—Consolidated Water Co., Utica, has purchased Hinckley Corp. of Hinckley, N. Y., and plans to construct filtration plant in that town with 54-in. supply line to Utica. Est. cost $2,250,000.

N. C., Spindale—Water works impvt. bonds will be issued in near future. $100,000. Fred C. Kinsey, Clk.

N. C., Star—Plans being formulated for installation of water works system, including elec. pump'g equipt. Beebe Co., Spartanburg, S. C., Engrs.

Ohio, Akron—Ord. passed providing for 7½ mi. water main extension. Hydrants to be installed. $198,000.

Ohio, Steubenville—Water works program will involve repairs at water and filtration plant, new softening plant, additional pumps,etc. Est. cost $190,000. J. N. Chester, Engrs., Pittsburgh, Cons. Engrs.

Ohio, Toledo—Appropriations for 1924, for water works improvements, embrace: Filtration, $175,000; low service pumping, $90,350; high service pumping, $133,725; services, $75,750; meters, $64,150; mains, $323,300 and high pressure, $27,800.

Okla., Stillwater—$200,000 bonds voted for water reservoir. Chas. Holzer, Mayor.

S. C., Cowpens—City will vote in May on $75,000 bonds for water works and sewerage. W. M. Moore, Mayor.

Tenn., Cookeville—V. V. Long & Co., Oklahoma City, Okla., retained by city to survey streets for water and sewers. Est. cost $150,000.

Tenn., Johnson City—City contemplates purchase of 10,000 acres of land at Braemer, as additional source of water supply.

Texas, Beaumont—Bids will be taken about June 12 for water works construction, involving 12,000,000-gal. filtration plant and piping. Burns & McDonnell Engrg. Co., Kansas City, Cons. Engrs.

Tex., Dallas—Trinity River impounding reservoir bonds voted for $5,000,000. J. C. Nagle, R. A. Thompson, Dallas, Cons. Engrs.

Tex., San Benito—City will vote on $95,000 water bonds. Mr. Brown, Mayor.

Tex., Snyder—Plans being prepared for completion of water wks. Est. cost $50,000. Elrod Engineering Co., 3124 Elm St., Dallas, Engrs.

Wash., Kelso—Election in about 2 months to vote on $250,000 bond issue for enlargement and impvt of City water works.

W. Va., Grafton—City contemplates installation of filtration plant. May vote on $125,000 bonds. Chamber of Commerce interested.

Wis., Madison—Will probably receive bids about July 1st for pipe line and let contract reservoir in 1925. 6,000,000 gal. reservoir, $125,000. Site and 3,000 feet 20-in.ch pipe line, $50,000. L. A. Smith, Supt. of Water Dept.

Wis., Milwaukee—Main exten. program involves 6,300 ft. 54-in. pipe est. at $300,000. J. Schwada City Clk. Central Bd. of Purchases will soon take bids for 3 chlorinators for Riverside Pumping Station. Est. cost $5,000. J. Schwada, City Engr.

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Smith Co., T. L., The

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Buffalo-Springfield Roller Co.

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Kentucky Rock Asphalt Co.

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Austin-Western Road Machinery Co.
The Good Roads Machinery Co., Inc.

Roofing Material.
The Barrett Co.
Carey Co., Philip, The
Pioneer Asphalt Co.
Warren Bros. Co.

Sand Dryers.
Cummer & Son Co., The F. D.
Littleford Brothers.

Scarifiers.
Austin-Western Road Machinery Co., The

Scrapers, Drag Line.
Pawling & Harnischfeger.
Sauerman Bros.

Scrapers, Graders, Plows, Etc.
Austin-Western Road Machinery Co., The

Scrapers, Power.
Sauerman Bros.

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Kalamazoo Fdry. & Mach. Co.
Dee Co., Wm. E.
Madison Foundry Co.

Sewer Cleaning Machinery.
Stewart, W. H.

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Cannelton Sewer Pipe Co.
Clay Products Assn.
Dee Clay Mfg. Co., W. E.
Rosing, Inc., Astrid S.

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The Barrett Co.

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Stewart, W. H.

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Austin-Western Road Machinery Co., The

Stone Elevators.
Austin-Western Road Machinery Co., The

Stone Spreaders.
Austin-Western Road Machinery Co., The
Burch Plow Works Co.

Stone Screens.
Austin-Western Road Machinery Co., The
Littleford Bros.

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Austin-Western Road Machinery Co., The

Street Lighting.
Holophane Glass Co.
Westinghouse Electric & Mfg. Co.

Street Sprinklers (Horse Drawn).
Austin-Western Road Machinery Co., The

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Austin Machinery Corp.

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Austin-Western Road Machinery Co., The

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Pawling & Harnischfeger.

Tanks, Water Supply.
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The Barrett Co.

Tarvia.
The Barrett Co.

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Dow & Smith.
Walter H. Flood.
Howard, J. W.
Kirschbraun, Lester.
Van Trump, Isaac.

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Austin-Western Road Mach. Co.

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Austin Machinery Corporation.
Best Tractor Co., C. L.
Ford Motor Co.
Holt Mfg. Co., Inc.

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Kalamazoo Fdry. & Mach. Co.

Trench Machinery.
Austin Machinery Corporation.
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De Laval Steam Turbine Co.

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National Water Main Cleaning Co.
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Waterproofing.
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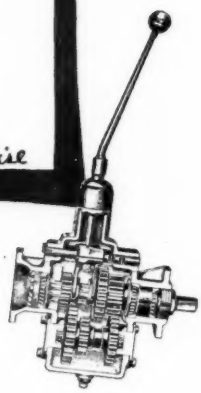
Glenn Wise



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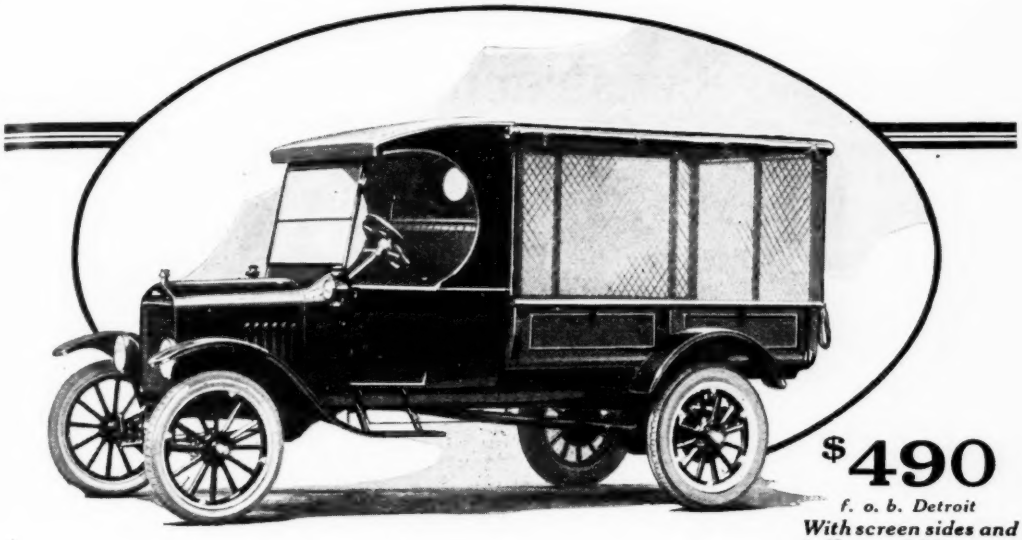

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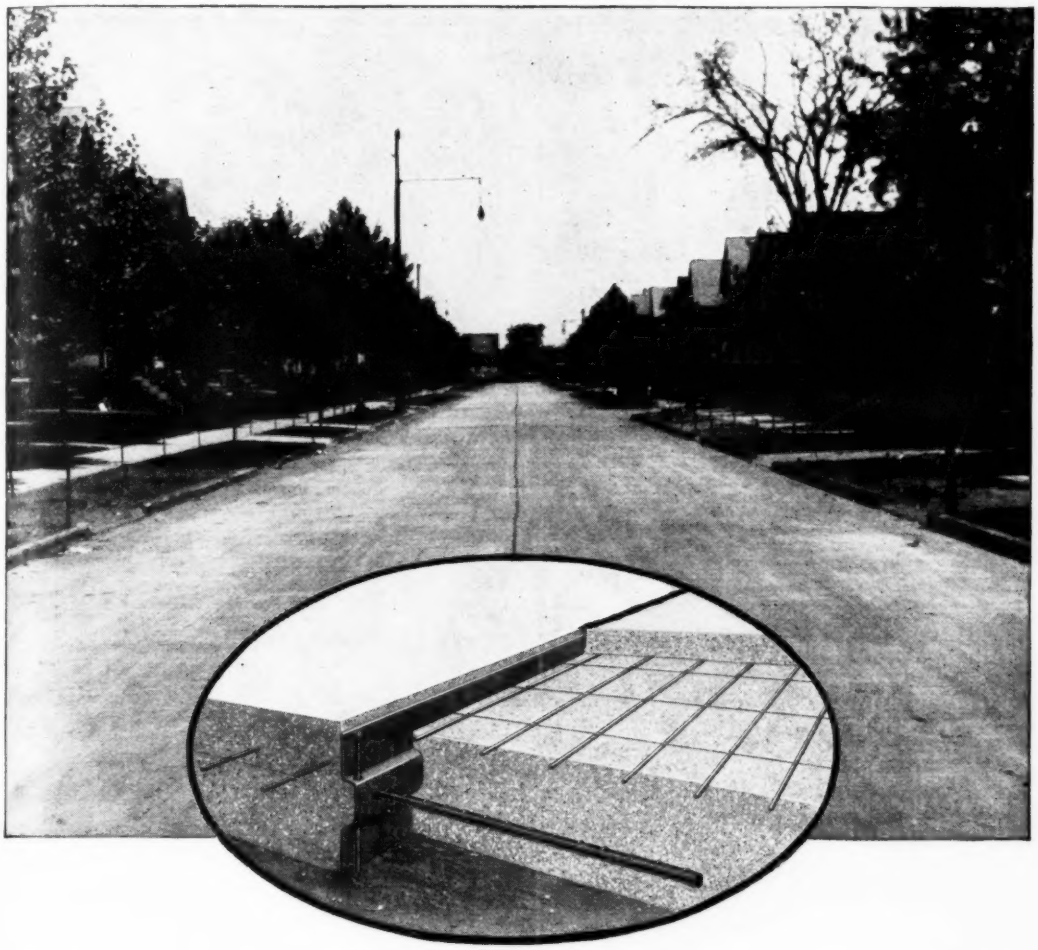

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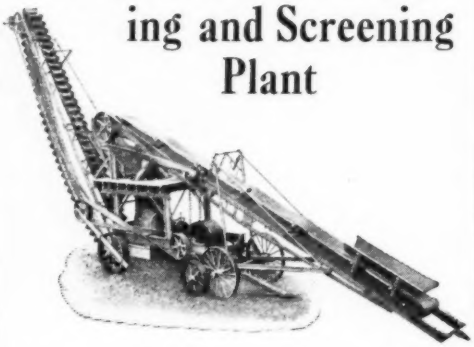

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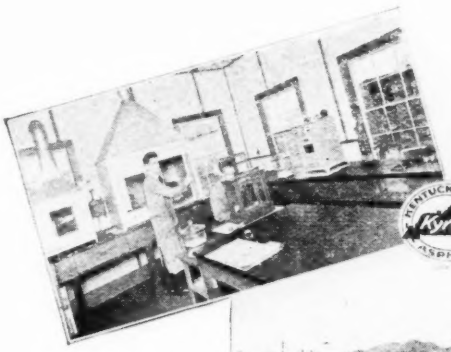

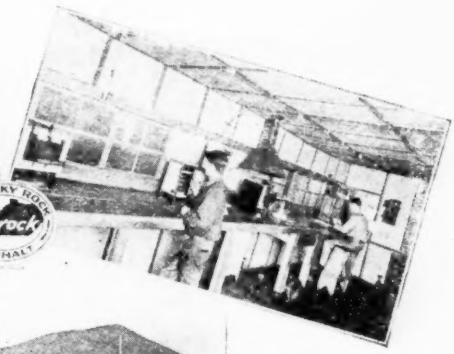

Above—Kyrock laboratories at Bowling Green and Kyrock, Kentucky.

Left—Thousands of tons of Kyrock stored for summer shipment.

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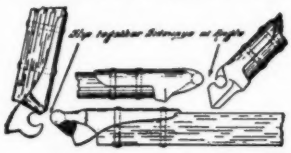

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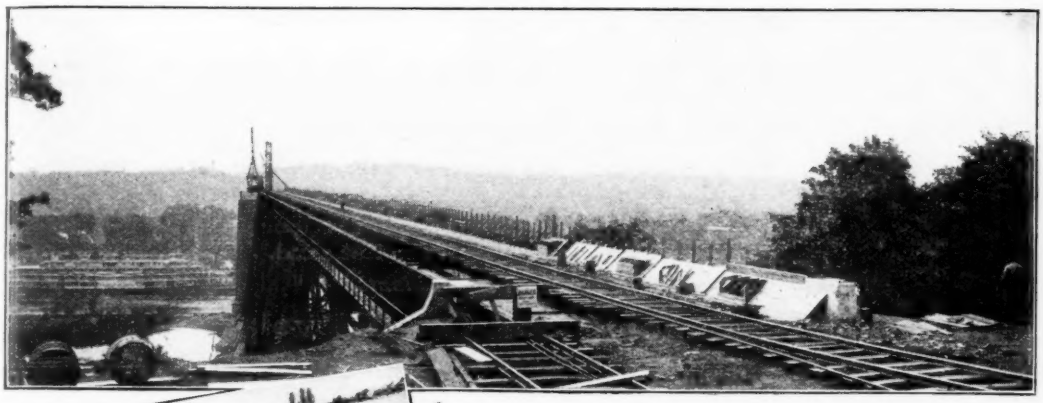

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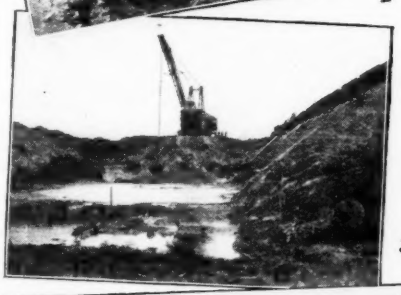

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1. *West end of the new bridge spanning "America's Rhine," the Hudson River, at Castleton, N. Y.*
2. *Excavating Dorn's Cut, which is 71 feet deep, for two tracks.*
3. *The Dragline operation known as Defreest Cut at the west end of the bridge. This cut is 6000 feet long and 25 feet deep.*
4. *A section of the Hoffmire Cut—looking west—and will accommodate two tracks.*

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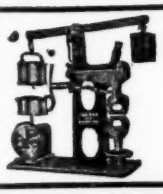

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